Current Status of All Claims in the Application:

1-27. (Canceled)

28. (New) An actuator assembly comprising:

a first attraction only actuator including a first core, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and

a control system that directs current to the conductor to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap, wherein the control system utilized the formula $I= \sqrt{F}$ to calculate the amount of current directed to the conductor, wherein I is the current and F is the force to be generated by the first actuator.

29. (New) The actuator assembly of claim 28 wherein the control system adjusts the current to the conductor to create an artificial force that dampens oscillations.

30. (New) The actuator assembly of claim 28 wherein the control system adjusts the current to the conductor to create an artificial force that provides stiffness compensation.

31. (New) The actuator assembly of claim 28 further comprising a second attraction only actuator including a first core, and a conductor secured to the first core.

32. (New) An apparatus including the actuator assembly of claim 28.

33. (New) An actuator assembly comprising:

a first attraction only actuator including a first core, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and

a control system that directs current to the conductor at a plurality of time steps, including t_1, t_2, t_3, and t_4, to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap.

34. (New) An actuator assembly comprising:

a first attraction only actuator including a first core, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and

a control system that directs current to the conductor to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap, wherein the control system calculates a calculated gap between the cores at least one of t_1, t_2, and t_3, and wherein the control system uses the calculated gap to calculate the current that should be directed to the conductor at t_4.

35. (New) The actuator assembly of claim 34 wherein the control system adjusts the current to the conductor to create an artificial force that dampens oscillations.

36. (New) The actuator assembly of claim 34 wherein the control system adjusts the current to the conductor to create an artificial force that provides stiffness compensation.

37. (New) The actuator assembly of claim 34 further comprising a second attraction only actuator including a first core, and a conductor secured to the first core.

38. (New) An apparatus including the actuator assembly of claim 34.

39. (New) An actuator assembly comprising:

a first attraction only actuator including a first core, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and

a control system that directs current to the conductor to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap, wherein the control system calculates a calculated gap between the cores at least two of t_1, t_2, and t_3, and wherein the control system uses the calculated gaps to calculate the current that should be directed to the conductor at t_4.

40. (New) An actuator assembly comprising:

a first attraction only actuator including a first core that is substantially "C" shaped, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and

a control system that directs current to the conductor to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap.

41. (New) An actuator assembly comprising:

a first attraction only actuator including a first core that is substantially "E" shaped, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and

a control system that directs current to the conductor to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap.

42. (New) An actuator assembly comprising:

a first attraction only actuator including a first core, a conductor secured to the first core, and a second core spaced apart a component gap from the first core, wherein the first actuator is an electromagnetic actuator; and

a control system that directs current to the conductor to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap.

43. (New) A polishing apparatus comprising:

a polishing pad; and

an actuator assembly that is utilized to adjust the position of the pad, the actuator assembly including (i) a first attraction only actuator including a first core, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and (ii) a control system that directs current to the conductor to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap.

44. (New) A method for making a device that includes the steps of providing a substrate and polishing the substrate with the apparatus according to claim 43.

45. (New) A method for making a wafer that includes the steps of providing a substrate and polishing the substrate with the apparatus according to claim 43.

46. (New) A method for positioning a stage, the method comprising the steps of:

coupling a first attraction only actuator to the stage, the first actuator including a first core, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and

directing current with a control system to the conductor to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap, wherein the control system uses the formula $I = \sqrt{F}$ to calculate the amount of current directed to the conductor, wherein I is the current and F is the force to be generated by the actuator combination.

47. (New) The method of claim 46 wherein the control system adjusts the current to the conductor to create an artificial force that dampens oscillations.

48. (New) The method of claim 46 wherein the control system adjusts the current to the conductor to create an artificial force that provides stiffness compensation.

49. (New) A method for positioning a stage, the method comprising the steps of:

coupling a first attraction only actuator to the stage, the first actuator including a first core, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and

directing current with a control system to the conductor at a plurality of time steps, including t_1, t_2, t_3, and t_4, to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap.

50. (New) A method for positioning a stage, the method comprising the steps of:

coupling a first attraction only actuator to the stage, the first actuator including a first core, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and

directing current with a control system to the conductor to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap, wherein the control system calculates a calculated gap between the cores at least one of t_1, t_2, and t_3, and wherein the control system uses the calculated gap to calculate the current that should be directed to the conductor at t_4.

51. (New) The method of claim 50 wherein the control system adjusts the current to the conductor to create an artificial force that dampens oscillations.

52. (New) The method of claim 50 wherein the control system adjusts the current to the conductor to create an artificial force that provides stiffness compensation.

53. (New) A method for positioning a stage, the method comprising the steps of:

coupling a first attraction only actuator to the stage, the first actuator including a first core, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and

directing current with a control system to the conductor to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap, wherein the control system calculates a calculated gap between the cores at least two of t_1, t_2, and t_3, and wherein the control system uses the calculated gaps to calculate the current that should be directed to the conductor at t_4.

54. (New) A method for positioning a stage, the method comprising the steps of:

coupling a first attraction only actuator to the stage, the first actuator including a first core that is substantially "C" shaped, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and

directing current with a control system to the conductor to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap.

55. (New) A method for positioning a stage, the method comprising the steps of:

coupling a first attraction only actuator to the stage, the first actuator including a first core that is substantially "E" shaped, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and

directing current with a control system to the conductor to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap.

56. (New) A method for making an apparatus for polishing a wafer, the method comprising the steps of:

providing a pad;

securing the pad to a stage; and

moving the stage by (i) coupling a first attraction only actuator to the stage, the first actuator including a first core, a conductor secured to the first core, and a second core spaced apart a component gap from the first core; and (ii) directing current with a control system to the conductor to attract the second core to the first core, wherein the amount of current directed to the conductor is calculated without measuring the component gap.

57. (New) A method for making an object including at least a polishing process, wherein the polishing process utilizes the apparatus made by the method of claim 56.

58. (New) A method of making a wafer including the steps of providing a substrate and polishing the substrate utilizing the apparatus made by the method of claim 56.